ENVIS CENTRE ON ENVIRONMENTAL BIOTECHNOLOGY, UNIVERSITY OF KALYANI, NADIA, WEST BENGAL

Proposed Annual Plan of Activities for 2019-20

Activities to be undertaken by the centre 2019-20

1. Website development and regular updation of ENVIS RP

   We will maintain and update subject-specific database, produce value-added products such as: educational-kits on various themes, environmental videos, photo bank, mobile Apps, Knowledge product CDs, case studies, success stories etc.

2. Development of descriptive/numerical databases and maintaining environmental information database for district/state/country on the following indicative list:

(a) Administrative Profile
(b) Socio-economic Profile
(c) Agriculture
(d) Industry
(e) Tourism & Heritage
(f) Ecology
(g) Biodiversity
(h) Forest Resources
(i) Other Natural Resources (water bodies, wetlands, corals, mangroves etc)
(j) Surface and Ground Water Resources
(k) Air Pollution
(l) Water Pollution
(m) Usage of Energy
(n) Sanitation
(o) Waste and waste management
(p) Disaster (natural and man-made)

3. Building Repository of Environmental Knowledge –
   - ✓ Four News letters on thematic areas
   - ✓ Two abstract volumes
   - ✓ Leaflet on thematic areas
   - ✓ Awareness posters
   - ✓ Awareness handouts
   - ✓ Mobile apps

4. Grid Based Decision Support System (GRIDSS) –as ministry assigned

   - ✓ **Eight** District of West Bengal will be surveyed and grid map prepared on the assigned environmental parameters.

5. Green Skill Development Programme (GSDP) – as assigned
   - ✓ Waste Management
   - ✓ Preparation of Peoples Biodiversity Register
   - ✓ Pollution Monitoring (Water)

6. Community-driven Environmentally Sustainable Villages Programme (CESVP) – as assigned
   Village awareness programmes such as:
   - ✓ Biofertilizer and vermicomposting
   - ✓ Waste utilization
   - ✓ Energy/Water conservation
   - ✓ Integrated aquaculture
   - ✓ Organic farming

7. Monitoring (Ground Truth Verification) of Schemes of Ministry - as assigned and depending upon the man power.

8. Extension & Outreach Programmes
   - ✓ Environmental day
   - ✓ International yoga day
   - ✓ Swachha Bharat
   - ✓ Celebration of Aranya Saptaha
   - ✓ Ozone day
   - ✓ Wetland Day
   - ✓ Water Day
   - ✓ Ornamental fish culture for livelihood development
   - ✓ Awareness programme in School, Colleges, Universities
   - ✓ Conducting Seminars, Workshop, Symposiums

9. Undertake Studies/ Case Studies/ Working Papers on issues facing the State/ country
10. Publication of two working papers annually to be submitted to ENVIS Focal Point
11. Publish four (Quarterly) ENVIS Newsletters, highlighting case studies and local success stories and circulate to concerned line departments of the State Governments, and district administrators and Ministers concerned.
12. Development of glossary on the assigned Subject Area
13. Contribute to development of ENVIPEDIA, an online information base on Environment related topics
14. Development of database of Experts from the State
15. Uploading of latest news on status of environment and related issues pertaining to the State

Theme based assignment of the centre

Theme: Environmental Biotechnology

Database development (National /State/District/Local)

- **Database on plants , bacteria, fungi, algae use for Bioremediation of Soil Environment-** Biotechnologies for Ex-Situ Remediation of Soil, Biotechnologies for in-Situ Remediation of Soil, Phytoremediation Technology for Soil Decontamination
- **Database on plants , bacteria, fungi, algae use for Bioremediation of Water Environment**- Ex-situ Decontamination of Groundwater, In-situ Bioremediation of Groundwater, Landfill Leach ate, Industrial Wastewater, Bio- treatment Technologies, Bio treatment of Surface Waters.
- **Database on plants, bacteria, fungi, algae use for Bioremediation for Air Environment-** Atmospheric Environment for Microorganisms, Microbial Degradation of Contaminants in Gas Phase, Biological Filtration Processes for Decontamination of Air Stream, Bioscrubbers. .
- **Bioaccumulation:** is the accumulation of substances, such as pesticides, or other chemicals in an organism.
- **Phyto remediation:** is use of plants for accumulation, removal or conversion of pollutants.
- Biotechnology Policy issues
- Nano biotechnology: Nanotechnology offers the potential of novel nanomaterials for the treatment of surface water, groundwater, wastewater, and other environmental materials contaminated by toxic metal ions, organic and inorganic solutes, and microorganisms. Due to their unique activity toward recalcitrant contaminants, many nanomaterials are under active research and development for use in the treatment of water and contaminated sites.nanotech-based technologies applied in water treatment consists of reverse osmosis, nanofiltration, ultra filtration membranes. Indeed, among emerging products one can name nanofiber filters, carbon nanotubes and various nanoparticles.
- collection and dissemination of information relating to biotechnology
- Bio-Composting (**Composting is promoting the biological decomposition of organic materials).**

Impact /Analysis Studies:

- The current and potential impacts of biotechnology in National /State/District/Local level.
- Impact of Education network in environmental Biotechnology
- Ananylis of state of Art in Biotechnology research
- Documentation and analysis of traditional knowledge;